

What is claimed is:

1. A dental appliance for spacing the occlusal surfaces of a user's maxillary and mandibular teeth and advancing the mandible, said dental appliance comprising:
 - 5 an upper tray for receiving the maxillary teeth;
 - a lower tray for receiving the mandibular teeth;
 - at least one upper bite pad carried by said upper tray having a downward projecting bite surface extended from a maxillary occlusal surface of said upper tray;
 - at least one lower bite pad carried by said lower tray having an upward projecting bite surface extended from a mandibular occlusal surface of said lower tray;
 - 10 said lower bite pad located anterior to said upper bite pad within the user's mouth so that said upward projecting bite surface of said lower bite pad is free to engage said maxillary occlusal surface of said upper tray, and said downward projecting bite surface of said upper bite pad is free to engage said mandibular occlusal surface of said lower tray to maintain said occlusal surfaces of the trays in a predetermined spaced relationship; and,
 - 15 said upper and lower bite pads arranged to abut each other for advancing the mandible and preventing posterior movement of the mandible while allowing the mandible lateral and vertical flexibility.
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2. The dental appliance of claim 1 wherein said upper and lower bite pads are releasably carried by said trays for interchanging different sizes and

shapes of bite pads to customize corrective adjustments resulting from the appliance to the specific needs of the user's mouth.

3. The dental appliance of claim 2 including an upper base member carried on the maxillary occlusal surface of said upper tray, and a lower base member carried on the mandibular occlusal surface of said lower tray; said upper base member and said lower base member adapted for releasably interconnecting with said upper and lower bite pads, respectively.

4. The dental appliance of claim 3 wherein said upper and lower base members include a first locking part, and said bite pads include a second locking part adapted for cooperating with said first locking part of said base members to releasably interconnect said pads to said base members.

5. The dental appliance of claim 4 wherein said first locking part of said base members comprises a dovetailed keyway, and said second locking part of said pads comprises a dovetailed key for engaging said dovetailed keyway.

15 6. The dental appliance of claim 1 including at least one elastic band interconnecting said upper tray with said lower tray to limit separation of said trays and prevent said lower bite pad from avoiding said upper bite pad and moving posteriorly.

7. The dental appliance of claim 6 including at least one upper button carried by said upper tray and at least one lower button carried by said lower tray; said elastic band engaging and extending between said upper and lower buttons to interconnect said trays.

8. The dental appliance of claim 7 wherein said elastic band is x-shaped for interconnecting with a plurality of upper and lower buttons carried by said trays.

9. The dental appliance of claim 1 wherein said upper and lower trays are adapted to conform to the user's maxillary and mandibular dentitions, respectively, 5 for holding the trays in place against the user's teeth.

10. The dental appliance of claim 9 wherein said downward projecting bite surface of said upper bite pad is adapted to conform to the mandibular dentitions in the opposing mandibular occlusal surface of said lower tray for cooperative engagement, and upward projecting bite surface of said lower bite pad is adapted to 10 conform to the maxillary dentitions in the maxillary occlusal surface of said upper tray for cooperative engagement.

11. A dental appliance comprising:

an upper tray for fitting to a user's maxillary teeth;

a lower tray for fitting to the user's mandibular teeth;

15 an upper bite pad carried by a maxillary occlusal surface of said upper tray;

a lower bite pad carried by a mandibular occlusal surface of said lower tray;

said upper and lower bite pads staggered to position said lower bite pad anterior to said upper bite pad so that said lower bite pad is free to engage said maxillary occlusal surface of said upper tray, and said upper bite pad is free to 20 engage said mandibular occlusal surface of said lower tray to vertically separate the trays; and,

said upper and lower bite pads arranged to abut each other to prevent posterior movement of the user's mandible when placed in the user's mouth.

12. The dental appliance of claim 11 wherein said upper and lower trays include a first locking part, and said bite pads include a second locking part adapted for cooperating with said first locking part of said trays to releasably interconnect said pads to said trays.

5 13. The dental appliance of claim 11 including at least one elastic band interconnecting said upper tray with said lower tray to limit separation of said trays and prevent said lower bite pad from avoiding said upper bite pad and moving posteriorly.

10 14. The dental appliance of claim 11 wherein said upper bite pad is adapted to conform to the mandibular dentitions in the opposing mandibular occlusal surface of said lower tray for cooperative engagement, and said lower bite pad is adapted to conform to the maxillary dentitions in the maxillary occlusal surface of said upper tray for cooperative engagement.

15 15. A dental appliance comprising:

an upper tray for fitting to a user's maxillary teeth;
a lower tray for fitting to the user's mandibular teeth;
an upper base member carried by a maxillary occlusal surface of said upper tray;
a lower base member carried by a mandibular occlusal surface of said lower tray;
an upper bite pad releasably carried by said upper base member;
a lower bite pad releasably carried by said lower base member;

5 said upper and lower bite pads staggered to position said lower bite pad anterior to said upper bite pad so that said lower bite pad is free to engage said maxillary occlusal surface of said upper tray, and said upper bite pad is free to engage said mandibular occlusal surface of said lower tray to vertically separate the trays; and,

 said upper and lower bite pads arranged to abut each other to prevent posterior movement of the user's mandible when placed in the user's mouth.

16. The dental appliance of claim 15 wherein said upper and lower base members include a first locking part, and said bite pads include a second locking part adapted for cooperating with said first locking part of said base members to releasably interconnect said pads to said base members.

17. The dental appliance of claim 16 wherein said first locking part of said base members comprises a dovetailed keyway, and said second locking part of said pads comprises a dovetailed key for engaging said dovetailed keyway.

15 18. The dental appliance of claim 15 including at least one elastic band interconnecting said upper tray with said lower tray to limit separation of said trays and prevent said lower bite pad from avoiding said upper bite pad and moving posteriorly.

20 19. The dental appliance of claim 15 wherein said upper bite pad is adapted to conform to the mandibular dentitions in the opposing mandibular occlusal surface of said lower tray for cooperative engagement, and said lower bite pad is adapted to conform to the maxillary dentitions in the maxillary occlusal surface of said upper tray for cooperative engagement.